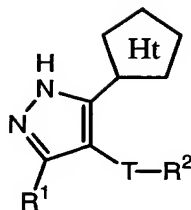


We Claim:

1. A compound of formula I:



I

or a pharmaceutically acceptable derivative or prodrug thereof, wherein:

Ht is a heterocyclic ring selected from pyrazol-3-yl, [1,2,4]triazol-3-yl, [1,2,3]triazol-4-yl, or tetrazol-5-yl, said pyrazol-3-yl having R<sup>3</sup> and QR<sup>4</sup> substituents, and said [1,2,4]triazol-3-yl or [1,2,3]triazol-4-yl substituted by either R<sup>3</sup> or QR<sup>4</sup>;

R<sup>1</sup> is selected from R, F, Cl, N(R<sup>8</sup>)<sub>2</sub>, OR, NRCOR, NRCON(R<sup>8</sup>)<sub>2</sub>, CON(R<sup>8</sup>)<sub>2</sub>, SO<sub>2</sub>R, NRSO<sub>2</sub>R, or SO<sub>2</sub>N(R<sup>8</sup>)<sub>2</sub>;

T is selected from a valence bond or a linker group;

each R is independently selected from hydrogen or an optionally substituted aliphatic group having one to six carbons;

R<sup>2</sup> is selected from hydrogen, CN, halogen, or an optionally substituted group selected from aryl, aralkyl, heteroaryl, heterocyclyl, acyclic aliphatic chain group having one to six carbons, or a cyclic aliphatic group having three to ten carbons;

R<sup>3</sup> is selected from R, OH, OR, N(R<sup>8</sup>)<sub>2</sub>, F, Cl, or CN;

Q is a valence bond, J, or an optionally substituted C<sub>1-6</sub> alkylidene chain wherein up to two nonadjacent carbons of the alkylidene chain are each optionally and independently replaced by J;

J is selected from  $-C(=O)-$ ,  $-CO_2-$ ,  $-C(O)C(O)-$ ,  $-NRCONR^8-$ ,  
 $-N(R)N(R^8)-$ ,  $-C(=O)NR^8-$ ,  $-NRC(=O)-$ ,  $-O-$ ,  $-S-$ ,  $-SO-$ ,  
 $-SO_2-$ ,  $-N(R)O-$ ,  $-ON(R^8)-$ ,  $-OC(=O)N(R^8)-$ ,  $-N(R)COO-$ ,  
 $-SO_2N(R^8)-$ ,  $-N(R)SO_2-$ , or  $-N(R^8)-$ ;

$R^4$  is selected from  $-R^8$ ,  $-R^5$ ,  $-NH_2$ ,  $-NHR^5$ ,  $-N(R^5)_2$ , or  
 $-NR^5(CH_2)_yN(R^5)_2$ ;

each  $R^5$  is independently selected from  $R^6$ ,  $R^7$ ,  
 $-(CH_2)_yCH(R^6)(R^7)$ ,  $-(CH_2)_yR^6$ ,  $-(CH_2)_yCH(R^6)_2$ ,  $-(CH_2)_yCH(R^7)_2$ ,  
or  $-(CH_2)_yR^7$ ;

y is 0-6;

each  $R^6$  is an optionally substituted group independently  
selected from an aliphatic, aryl, aralkyl, aralkoxy,  
heteroaryl, heteroarylalkyl, heteroarylalkoxy,  
heterocyclyl, heterocyclylalkyl, or heterocyclylalkoxy,  
group;

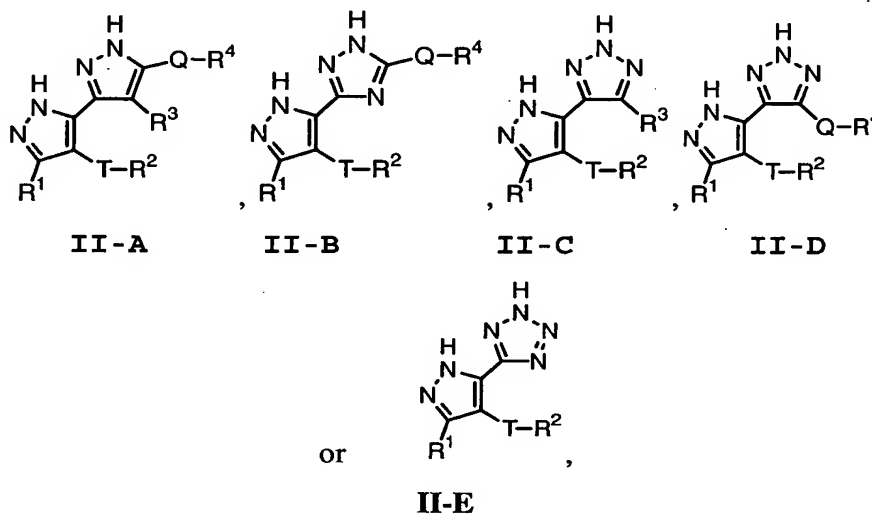
each  $R^7$  is independently selected from an optionally  
substituted aliphatic, hydroxyalkyl, alkoxyalkyl,  
aryloxyalkyl, or alkoxycarbonyl;

each  $R^8$  is independently selected from R or two  $R^8$  on the  
same nitrogen taken together with the nitrogen optionally  
form a four to eight membered, saturated or unsaturated  
heterocyclic ring having one to three heteroatoms;  
and each substitutable ring nitrogen is independently  
substituted by R,  $NR_2$ , COR,  $CO_2(C_1-C_6$  optionally  
substituted alkyl),  $SO_2(C_1-C_6$  optionally substituted  
alkyl),  $CONR_2$ , or  $SO_2NR_2$ ;

provided that: (a)  $TR^2$  and  $QR^4$  are not the same; (b)  $TR^2$  and  
 $R^3$  are not the same; (c) when Ht is tetrazol-5-yl and  $R^1$   
is methyl, then  $TR^2$  is other than hydrogen; (d) when Ht  
is [1,2,3]triazole-4-yl and  $R^1$  and  $R^3$  are both methyl,  
then  $TR^2$  is other than hydrogen; and (e) when Ht is

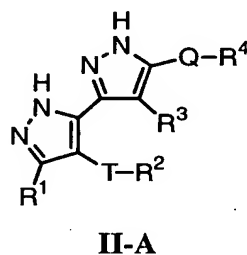
pyrazol-3-yl and  $R^1$  and  $R^3$  are both hydrogen, then  $TR^2$  is other than methyl when  $QR^4$  is phenyl in the 4-position;.

2. The compound according to claim 1; said compound is selected from the following:



or a pharmaceutically acceptable derivative or prodrug thereof.

3. The compound according to claim 2 having the formula

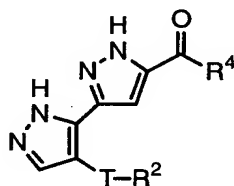


or a pharmaceutically acceptable derivative or prodrug thereof.

4. The compound according to any one of claims 1, 2, or 3 having one or more of the following features: (a) Q is  $-CO-$ ,  $-CO_2-$ , or  $-CONH-$ ; (b) T is a valence bond; (c)  $R^1$  is

hydrogen or NHR; (d)  $R^2$  is an optionally substituted aryl ring; (e)  $R^3$  is hydrogen; (f)  $R^4$  is selected from  $R^5$ ,  $-NHR^5$ ,  $-N(R^5)_2$ ,  $-NR^5R^6$ ,  $-NHCHR^5R^6$ , or  $-NHCH_2R^5$ ; or (g)  $R^5$  is an optionally substituted group selected from aryl, aralkyl, heteroaryl, heteroarylalkyl, heterocyclyl, heterocyclylalkyl group,  $(CH_2)_yR^6$ ,  $(CH_2)_yR^7$ , or  $(CH_2)_yCH(R^6)(R^7)$ .

5. The compound according to claim 4 having the formula



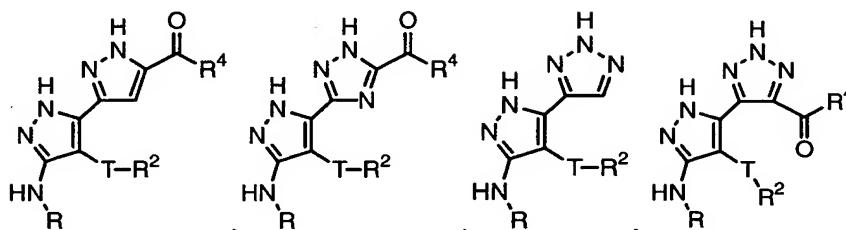
III-A

or a pharmaceutically acceptable derivative or prodrug thereof.

6. The compound according to claim 5 having the following features: (a) T is a valence bond; (b)  $R^2$  is an optionally substituted aryl ring; (c)  $R^4$  is selected from  $R^5$ ,  $-NHR^5$ ,  $-N(R^5)_2$ ,  $-NR^5R^6$ ,  $-NHCHR^5R^6$ , or  $-NHCH_2R^5$ ; and (d)  $R^5$  is an optionally substituted group selected from aryl, aralkyl, heteroaryl, heteroarylalkyl, heterocyclyl, heterocyclylalkyl group,  $-(CH_2)_yR^6$ ,  $-(CH_2)_yR^7$ , or  $-(CH_2)_yCH(R^6)(R^7)$ .

7. The compound according to claim 1 wherein said compound is selected from those listed in Table 1.

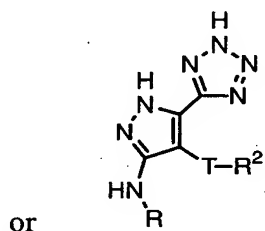
8. The compound according to claim 1, said compound selected from the following:



IV-A

IV-B

IV-C IV-D



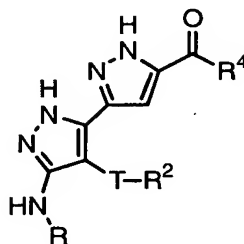
or

IV-E

or a pharmaceutically acceptable derivative or prodrug thereof.

9. The compound according to claim 8 having one or more of the following features: (a) Q is -CO-, -CO₂-, or -CONH-; (b) T is a valence bond; (c) R² is an optionally substituted aryl ring; (d) R³ is hydrogen; (e) R⁴ is selected from R⁵, -NHR⁵, -N(R⁵)₂, -NR⁵R⁶, -NHCHR⁵R⁶, or -NHCH₂R⁵; or (f) R⁵ is an optionally substituted group selected from aryl, aralkyl, heteroaryl, heteroarylalkyl, heterocyclyl, heterocyclalkyl group, (CH₂)ᵧR⁶, (CH₂)ᵧR⁷, or (CH₂)ᵧCH(R⁶)(R⁷).

10. The compound according to claim 9 having the formula



IV-A

or a pharmaceutically acceptable derivative or prodrug thereof.

11. The compound according to claim 10 having the following features: (a) T is a valence bond; (b) R<sup>2</sup> is an optionally substituted aryl ring; (c) R<sup>4</sup> is selected from R<sup>5</sup>, -NHR<sup>5</sup>, -N(R<sup>5</sup>)<sub>2</sub>, -NR<sup>5</sup>R<sup>6</sup>, -NHCHR<sup>5</sup>R<sup>6</sup>, or -NHCH<sub>2</sub>R<sup>5</sup>; and (d) R<sup>5</sup> is an optionally substituted group selected from aryl, aralkyl, heteroaryl, heteroarylalkyl, heterocyclyl, heterocyclylalkyl group, -(CH<sub>2</sub>)<sub>y</sub>R<sup>6</sup>, -(CH<sub>2</sub>)<sub>y</sub>R<sup>7</sup>, or -(CH<sub>2</sub>)<sub>y</sub>CH(R<sup>6</sup>)(R<sup>7</sup>).

12. The compound according to claim 1 wherein said compound is selected from those listed in Table 2.

13. A composition comprising a compound according to any one of claims 1 to 12 in an amount sufficient to detectably inhibit protein kinase activity, said protein kinase selected from one or more of ERK, JAK, JNK, Aurora, GSK, KDR, AKT, or a protein kinase related thereto; and a pharmaceutically acceptable carrier.

14. The composition according to claim 13 wherein said compound is formulated in a pharmaceutically acceptable manner for administration to a patient.

15. A composition according to claim 13 further comprising a therapeutic agent, either as part of a multiple dosage form together with said compound or as a separate dosage form.

16. A method of inhibiting protein kinase activity in a biological sample, wherein said protein kinase is selected from ERK, JAK, JNK, Aurora, GSK, KDR, AKT, or a protein kinase related thereto, comprising the step of contacting said sample with a compound according to any one of claims 1 to 12.

17. A method for treating a protein kinase-mediated disease state in a patient, wherein said protein kinase is selected from one or more of ERK, JAK, JNK, Aurora, KDR, AKT, or a protein kinase related thereto, comprising the step of administering to said patient a composition according to claim 13.

18. The method according to claim 17, comprising the additional step of administering to said patient a therapeutic agent either as part of a multiple dosage form together with said compound or as a separate dosage form.

19. A method of treating a disease state in a patient, wherein said disease state is selected from cancer, stroke, diabetes, hepatomegaly, cardiovascular disease, Alzheimer's disease, cystic fibrosis, viral disease, autoimmune

diseases, atherosclerosis, restenosis, psoriasis, allergic disorders, inflammation, neurological disorders, a hormone-related disease, conditions associated with organ transplantation, immunodeficiency disorders, destructive bone disorders, proliferative disorders, infectious diseases, conditions associated with cell death, thrombin-induced platelet aggregation, chronic myelogenous leukemia (CML), liver disease, pathologic immune conditions involving T cell activation, or CNS disorders, comprising the step of administering to said patient a composition according to claim 13.

20. The method according to claim 19 wherein the disease state is cancer.

21. The method according to claim 20 wherein the disease state is a cancer selected from breast; ovary; cervix; prostate; testis, genitourinary tract; esophagus; larynx, glioblastoma; neuroblastoma; stomach; skin, keratoacanthoma; lung, epidermoid carcinoma, large cell carcinoma, small cell carcinoma, lung adenocarcinoma; bone; colon, adenoma; pancreas, adenocarcinoma; thyroid, follicular carcinoma, undifferentiated carcinoma, papillary carcinoma; seminoma; melanoma; sarcoma; bladder carcinoma; liver carcinoma and biliary passages; kidney carcinoma; myeloid disorders; lymphoid disorders, Hodgkin's, hairy cells; buccal cavity and pharynx (oral), lip, tongue, mouth, pharynx; small intestine; colon-rectum, large intestine, rectum; brain and central nervous system; or leukemia.



22. The method according to claim 20 comprising the additional step of administering to said patient a chemotherapeutic agent either as part of a multiple dosage form together with said compound or as a separate dosage form.

23. The method according to claim 19 wherein the disease state is cardiovascular disease.

24. The method according to claim 23 wherein the disease state is a cardiovascular disease selected from restenosis, cardiomegaly, arteriosclerosis, myocardial infarction, or congestive heart failure.

25. The method according to claim 23 comprising the additional step of administering to said patient a therapeutic agent for treating cardiovascular disease either as part of a multiple dosage form together with said compound or as a separate dosage form.

26. A composition for coating an implantable device comprising a compound according to claim 1 and a carrier suitable for coating said implantable device.

27. An implantable device coated with a composition according to claim 26.

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